

# USE OF HIGH-FIDELITY SIMULATION IN NURSING EDUCATION: FOUR STATE STORIES

June, 2012

Simulation is designed to imitate the clinical environment and provides the opportunity for the student to demonstrate knowledge and skills learned within their education program as well as the opportunity to practice decision making and critical thinking (Li, 2007; Decker et al., 2008). Several studies have demonstrated that simulation training allows the training agenda to be determined by the needs of the students and not the patients; that it is a safe learning environment to practice rare and critical events (Decker et al, 2008); and that it provides objective feedback to students (Good, 2003; Kneebone, 2003). Several studies have found simulation to be an effective way to increase clinical competence, to build confidence in skills in a supportive environment and providing repetitive practice which can help speed acquisition of skills (Steadman et al., 2006; Gordon et al., 2001; Maran & Glavin, 2003), enhance technical, behavioral and social skills (Small et al., 1999) and provide reflective learning through debriefing feedback (Gaba, 2000) interviewing and physical examination skills.

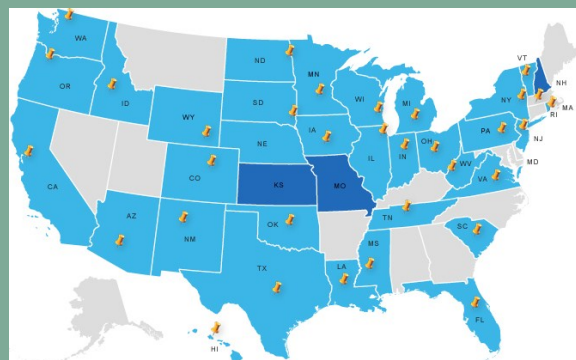


Several state nursing workforce centers have examined the use of simulation within their states in partnership with multiple organizations. The story of four subscribers to the Forum of State Nursing Workforce Centers (Illinois, Florida, North Dakota and Ohio) provides information about the extent of implementation of simulation equipment, challenges and future plans.

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*"Taking the Long View  
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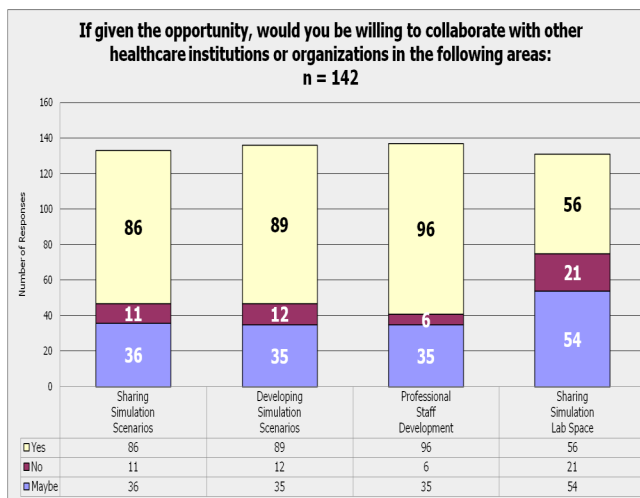




ILLINOIS  
CENTER FOR  
NURSING

**Linda B. Roberts, MSN, RN**

The IL Center for Nursing Advisory Board developed a survey to map clinical simulation labs in IL, the level of simulation in use and the primary users of these facilities. Definitions of simulation levels were created and accompanied the survey. The survey was distributed as an on-line survey of IL health care simulation labs in May, 2009. The IL Center for Nursing, in partnership with the Metropolitan Chicago Healthcare Council, IL Hospital Association and the IL HomeCare Council distributed the survey. Over 124 IL Nursing Education Programs, 8 Medical Education Programs, 200 hospitals and 263 members of the IHCC received the survey. Responses were received from 150 institutions, including 66 nursing education programs, 9 medical schools, 40+ hospitals, home care and health department. Survey results indicate that nursing had the highest utilization rate of clinical simulation laboratories as compared to other health care disciplines. Only 40% of these programs use the lab for interdisciplinary training (i.e. Rapid Response, trauma/ICU resuscitation, emergency room resuscitation, working in a team environment). Forty-six percent of the institutions acknowledged having a clinical simulation lab. Results indicate that there is an interest in developing a simulation consortium for expansion and coordination of healthcare simulation opportunities in IL with hospitals, health care institutions, nursing, medical and allied health schools.



Results, which can be found on the IL Center for Nursing website ([www.nursing.illinois.gov](http://www.nursing.illinois.gov)), indicate that there is interest in developing a simulation consortium for expansion and coordination of healthcare simulation opportunities in IL with hospitals, health institutions, nursing, medical and allied health schools. The IL Healthcare Action Coalition Collaboration Workgroup will use the simulation survey results as an interdisciplinary education collaboration project. Next steps include to identify best practices and funding resources to promote an interdisciplinary alliance.



**Mary Lou Brunell, RN, MSN**  
**Executive Director**

From 2009 to 2011, the Blue Cross and Blue Shield of Florida Foundation and the Florida Center for Nursing (FCN) partnered on a project to promote the use of simulation technology in nursing education in both academic and industry settings. The primary goal of the project was to maximize the use of simulation technology in the preparation of new and continuing education of current RNs in Florida thus addressing the nursing shortage by increasing the nurse supply through increased production and retention. Information was collected using both quantitative and qualitative methods as well as state and national simulation site visits. The nurse education (including RN and LPN programs) and acute care hospital surveys were completed with great success (53% response rate) providing a statewide representation of current usage. Practicing nurses, nurse educators, nursing students, simulation center staff, workforce system staff, and representatives of nurse collaborative groups participating in eight focus groups across the state providing real-time input on the current and future use of simulation. Individual Interviews were conducted with elected officials, industry representatives, and philanthropic organization staff to augment qualitative information. Reports from each of these project components are available on the FCN's website ([www.FLCenterForNursing.org](http://www.FLCenterForNursing.org)). A final set of 'draft' recommendations was written to provide the framework for discussion at a statewide think tank –

*Simulation, Nursing and Healthy Florida Communities: An Imperative for Change.* Think tank participants provided expectations for next steps:

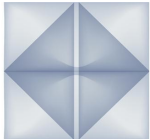
- Develop statewide model for Florida; Form the right subject matter teams and committees.
- Build collaborative governance model
- Build web-based/social network strategy to build understanding, support, and advocacy; Develop system/team room for sharing of ideas across regions and enterprises
- Identify organization to organize, convene, etc.
- Develop a flexible strategic plan

Throughout the project, the leadership team received guidance from an Advisory Panel composed of nursing educators and administrators, simulation industry representatives, faculty experienced in working with simulation technology, and national expertise. Armed with two years of information and recommendations, funding was sought to implement the recommendations. With support of the BCBSF Foundation,



the FCN is proud to launch the *Florida Healthcare Simulation Alliance*. The advisory panel has transitioned to serve as the Alliance Advisory Board, expanding its membership to include experience in simulation across a wider range of healthcare disciplines. The mission—to advance, coordinate, and expand the use of all forms of simulation in academic settings, healthcare institutions, and agencies across the state to advance healthcare education to foster patient safety. Visit our website to learn more:

[www.FloridaHealthSimAlliance.org](http://www.FloridaHealthSimAlliance.org)

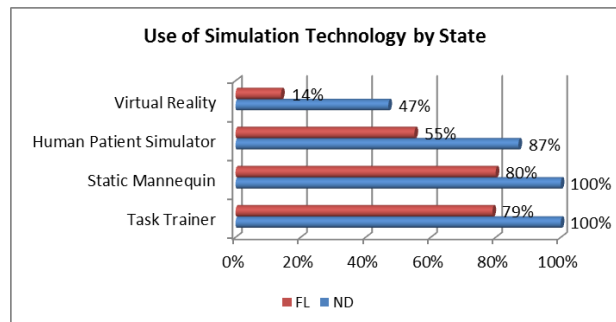


### North Dakota Center for Nursing

A unified voice for nursing excellence.

### Patricia Moulton, PhD Executive Director

The North Dakota Nursing Education Consortium composed of all of the nursing education programs in North Dakota has over the last five years worked to develop greater opportunities to incorporate high-fidelity human patient simulation. The Consortium is led by Dean Denise Korniewicz at the University of North Dakota. The Consortium has been successful in obtaining both legislative and higher education funding. Funding has provided faculty training, technical support and simulation equipment in all public, private and tribal nursing programs in the state. The use of simulation in the training of future nurses has several benefits including the ability to practice clinical situations in a safe environment, especially when patient census can be a constricting factor in expanding clinical practice sites in some rural areas of the state. The consortium has resulted in a marked increase in the use of high-fidelity human patient simulators from 25% of nursing programs in 2005 to 87% in 2010. In comparison, only 55% of Florida human patient simulation centers and 66% of Illinois nursing programs utilized this level of simulation. In addition, most ND programs have the ancillary equipment needed to conduct sessions including video cameras for videotaping sessions for debriefing. However, little space is available for simulation across all nursing programs. ND programs have an average of ¼ of the space as compared to Florida programs. This limits program's ability to have quality simulation sessions. Faculty and students have indicated that the simulators have had a great impact on their programs. This includes more creativity in presenting class materials and practice and excitement by students that have the opportunity to practice skills in a safe environment. ND nursing programs have also indicated barriers including the addition to faculty workload from learning, planning and carrying out simulation sessions and the need for more training and technical support. For more information about the ND Nursing Education Consortium email Dean Denise Korniewicz at [Denise.Korniewicz@email.und.edu](mailto:Denise.Korniewicz@email.und.edu).





## **Connecting the Dots: Identifying Simulation Resources in Ohio**

**Lisa Anderson MSN ,RN**

**Vice President**

### **Background:**

In Ohio, hospitals use simulation to provide additional clinical training for seasoned and new graduate nurses. Across academic nursing programs, there is intense competition for clinical training sites, particularly for specialty areas. Although the Ohio Board of Nursing permits the use of simulation in nursing education programs, there is no specificity around the equivalency of simulation training as compared to onsite clinical training. Therefore, simulation is viewed by most schools as an aide to clinical site training, not a replacement.

Consequently, a series of discussions began through the **Ohio Network for Nursing Workforce (ONNW)**, about the extent of simulation throughout the state and its implications for nursing education and practice.

The objectives were to create a comprehensive state profile and identify needs as well as interest to collaborate.

Data was collected in 2011 using survey tools adapted from the Florida Center for Nursing. Surveys were sent to 175 colleges of nursing with a 37% response rate and 112 hospitals with a 38% response rate.

### **Key Findings:**

- Simulation in Ohio is prevalent in hospitals (93%) and schools (97%). Simulation use is expected to grow in usage in hospitals (58%) and schools (82%).
- During the week, simulation centers are active 25 hours in hospitals and 15 hours in schools. Simulation centers are inactive on the weekends.
- The majority of hospitals (83%) and schools (87%) write their own scenarios. A lack of time to write scenarios and difficulties adapting "borrowed" scenarios were cited by both hospitals and schools as significant barriers.
- Interest in participating in a regional collaborative center was high among hospitals (74%) and schools (77%). Less than half of the hospitals (44%) cited cost as a primary barrier while 75% of schools felt there were no barriers.
- Evaluating education outcomes was identified by hospitals as the most acute need in using simulation education (58%). Providing hands-on training to faculty to implement simulation learning was cited as the most critical need in schools (68%).

### **Implications:**

- Consider expanding simulation use in hospitals and schools on the weekends provided there is an identified need, i.e. a nursing program expansion, and sufficient clinical staffing support exists.
- Pursue collaboration regionally in terms of a simulation center or other type of alliance.
- Consider how to effectively share scenarios and create the mechanism to customize situations to meet the individual organization's learning objectives or curriculum requirements.
- Consider how to best evaluate simulation as an effective teaching strategy and how best to educate professionals on how to utilize it, whether in the practice or academic setting.

### **Next Steps:**

- Communicate findings to the participants and the public, either through a briefing or white paper.
- Create an electronic directory of contact information for hospitals and schools of nursing.
- Establish a work committee to develop a strategic plan to utilize the findings.



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